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A Stereo Graphic Equalizer

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Summary

Frequency response is an audio system characteristic that plays an important role in determining the quality of the sound. Poor room acoustics can degrade the overall frequency response of even the most expensive audio systems. Though sometimes standard bass and treble controls help compensate for frequency irregularities caused by room acoustics, they do not offer enough flexibility for every acoustic situation. An octave band equalizer is a highly versatile tone control unit that offers the listener control over 10 octaves of the audio frequency spectrum. Therefore, an equalizer is superior to standard tone controls for tapering the frequency response of an audio system. Most equalizer designs consist of three basic building blocks, an input buffer, resonant circuitry or bandpass filters having adjustable gain, and a summing amplifier. For this project, portions of an existing equalizer design were redesigned and some new features were added. Test results of this unit revealed the numerous tone variations that can be achieved.